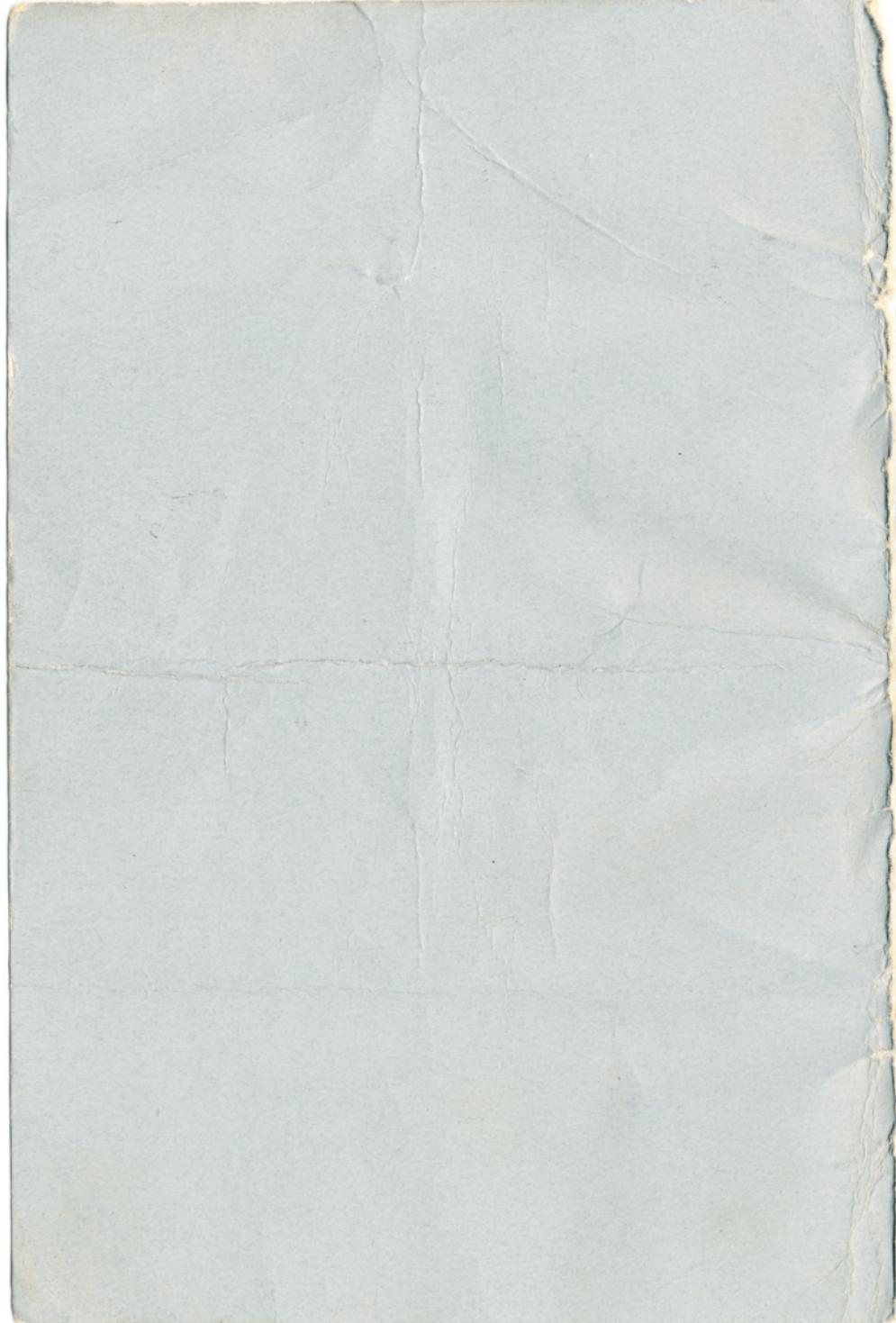
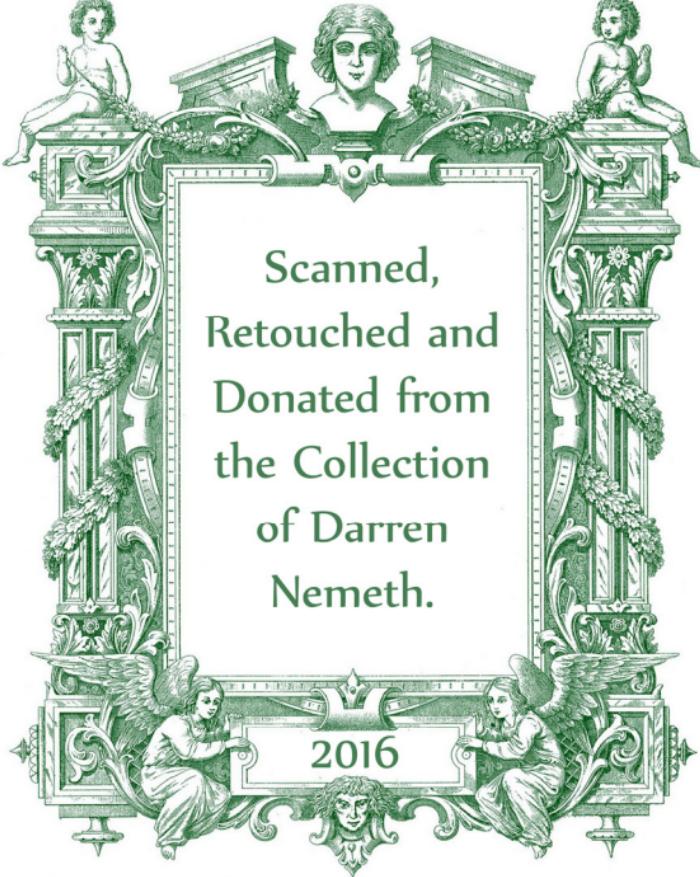


Care and Operation  
BELL & HOWELL  
*Filmo*  
REGISTERED  
AUTOMATIC  
Cine Camera



BELL & HOWELL COMPANY  
1801 LARCHMONT AVENUE  
Corner West Ravenswood Avenue  
CHICAGO, ILL.





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Nemeth.

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## IMPORTANT INSTRUCTIONS READ CAREFULLY

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Upon first opening door of camera, you will find a roll of red and black paper leader, which has been properly threaded to show the path taken from a full unexposed spool of film. Note particularly the relative size of the loops; push starting button, observing the action of the movement and the running of the leader. Thread this paper leader several times before loading a full spool, in order to familiarize yourself with the proper method.

Study instructions carefully before attempting to load and operate the camera. Become thoroughly familiar with the operating requirements and particularly with handling the film spools in both loading and unloading. *Extreme care should be exercised to keep the red and black paper leader taut on the spool, both at the beginning and end to prevent admittance of light.* A fogged or light struck film may spoil the very picture you most desired.

While the film rolls are daylight loading, the camera should not be loaded in the glare of bright sunlight but rather in subdued light to circumvent any possibility of fogging the film.

Motion pictures are much less complicated to make than still camera pictures. When you have mastered a few of the essentials, such as loading, unloading, lens diaphragm stop number for the proper exposure, the rest is simply automatic.

BELL & HOWELL COMPANY.

NOTE: For your own protection see important GUARANTEE and REGISTER used on inside of back cover.

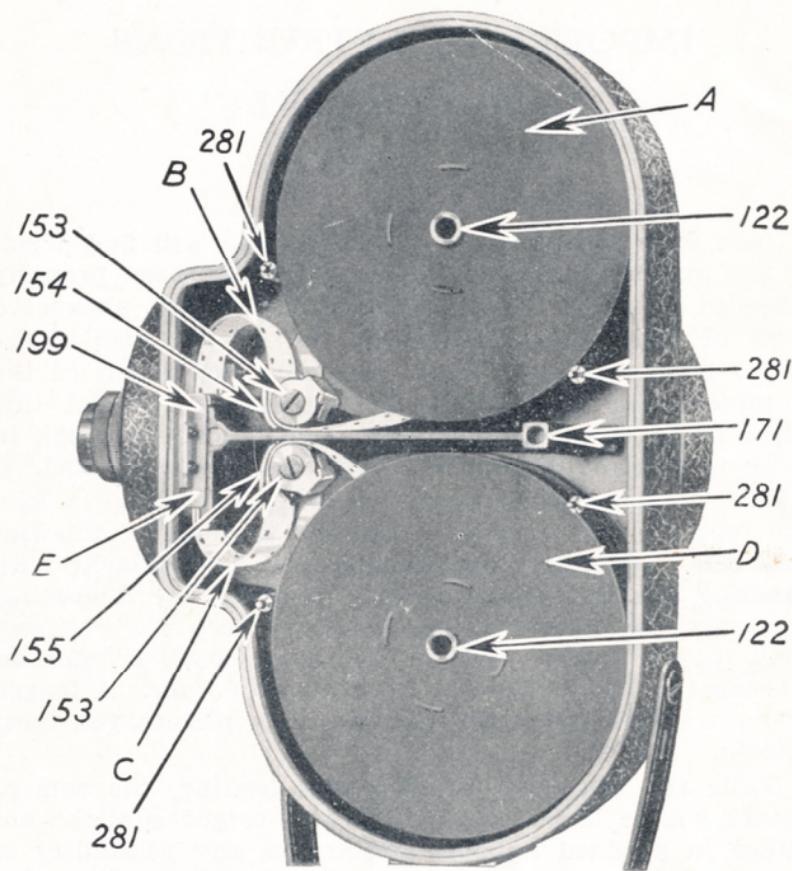


Fig. No. 5

## Key to Numbered Cut

A—Loaded Spool (Feed).	153—Film Sprocket (Upper and Lower).
B—Upper Spool.	154—Film Guide Shoe, Upper.
C—Lower Loop.	155—Film Guide Shoe, Lower.
D—Empty Spool (Takeup).	171—Gate Arm.
E—Location of Shuttle Teeth. (Pull out Film Gate 171).	199—Tension Guide Rail—Front.
122—Feeding Spindle (Upper and Lower).	281—Floating Film Guard Rollers.

## HOW TO LOAD THE FILMO AUTOMATIC CINE CAMERA

(See page 2 for reference to part numbers)

1. Insert loaded spool (A) on feed spool spindle (122) (spool can be placed on the spindle only one way), carefully unreel about one and one-half feet of paper leader.

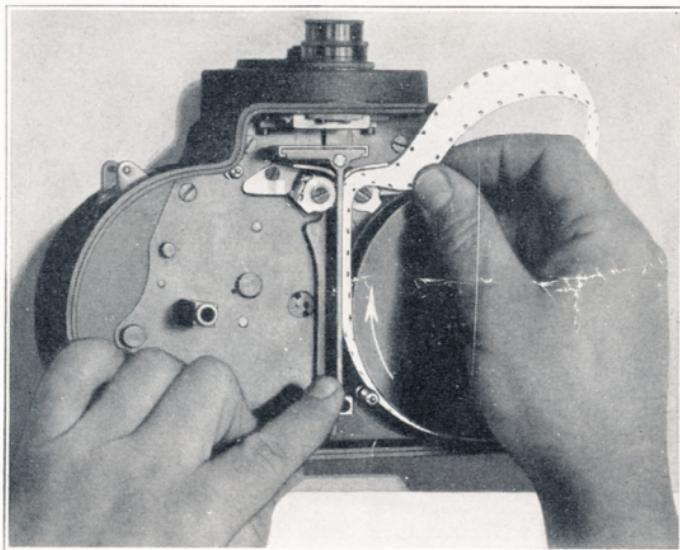


Fig. No. 1

*Loaded spool placed on Feed Spindle; opening Film Gate and first operation of threading leader.*

*NOTE: It is advisable to keep the safety cover on the spool while threading the camera until you have become so familiar with the following operations that you feel it is no longer necessary to use this precaution. Be sure to remove the metal spool safety cover before closing the door of camera.*

Make sure that it is tightly wound or taut and is not advanced beyond the point marked "STOP" during the threading operation. Open the film gate by pulling down gate arm (171) with left first finger, thence insert leader between gate arm (171) and upper sprocket (153), slipping the perforations of the paper leader upon the teeth of the sprocket (153) with the right first finger. After engaging leader to sprocket turn film spool sufficiently to take up any slack between sprocket and spool.

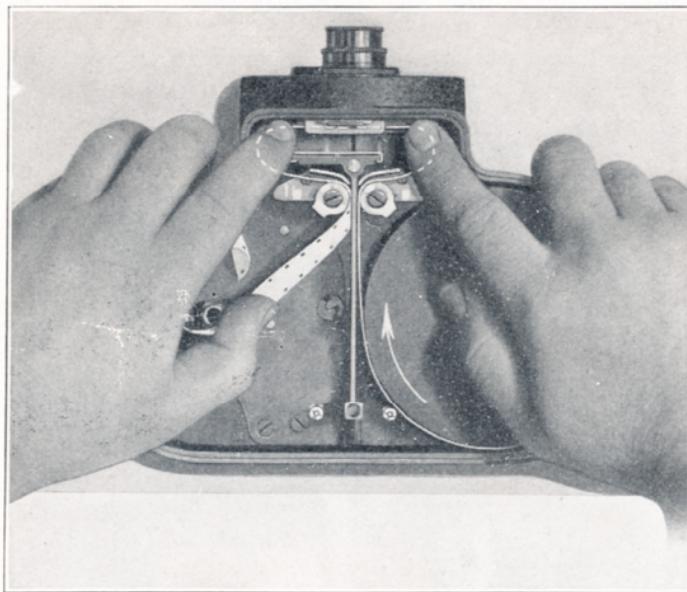


Fig. No. 2

*Forming the upper and lower loops; inserting leader in film aperture channel and engaging film perforations with shuttle teeth, also upper and lower sprocket teeth.*

2. Form the upper and lower loops (see figure No. 5, page 2), making them approximately the size shown in figure No. 2. Insert leader in the film channel by slightly raising the outer edge of part (199) (it has spring tension), allowing perforation of leader to enter the shuttle teeth of film movement mechanism at point marked "E" (see figures No. 5). Perforation should also be properly entered on both the upper and lower sprocket teeth. Now

make close observation of fig. No. 2, which shows the proper formation of the upper and lower loops, the manner of inserting the leader in the film aperture channel and the method of engaging the film perforations of the paper leader with the shuttle teeth as well as the teeth of the upper and lower sprockets.

3. Insert paper leader in the hub slot of the take-up spool, and put it on the take-up spindle (122) (it can only go one way—square hole first with gate open). Take up the slack slowly by turning spool to the right as shown by the arrows on spool in figure No. 3. This operation will also determine whether or not the paper leader has been properly fastened to the hub. Close the film gate by pushing gate arm (171) with the right thumb. In performing this operation, see that perforations are in proper engagement with each of the sprockets, also the shuttle teeth. See figure No. 3 showing particularly the relative size of the loops which must be maintained for good results. After closing the gate count the film perforations visible in the loops. There should be six in each, the lower loop appearing a trifle longer than the upper.

NOTE: Make sure flanges of spool are not bent and leader enters freely without binding on the sides. Bend flanges wherever necessary to allow leader to seat properly on the hub as it takes up.

4. Now test the accuracy of the loading by pressing the starting button quickly, noting that the paper leader runs through the sprockets and aperture channel as well as moving the take-up spool in the proper direction. Do not hold the starting button in operating position but move it quickly several times; while doing this see that the leader does not run or advance on the upper sprocket beyond the point marked "STOP."

5. Camera is now ready to receive the door. It will not go on if the gate arm (171) is not properly in position, that is, closed securely against the film channel. Be sure to turn locks on door to closed position. Camera should not be opened again until the entire reel has been exposed. If for any reason it becomes necessary to open the camera after only a part of the reel has been exposed, take the camera into a dark room. Never attempt to take off parts of the exposed film or make adjustments necessitating the removing of the door while the camera is loaded, except under subdued ruby light in a dark room.

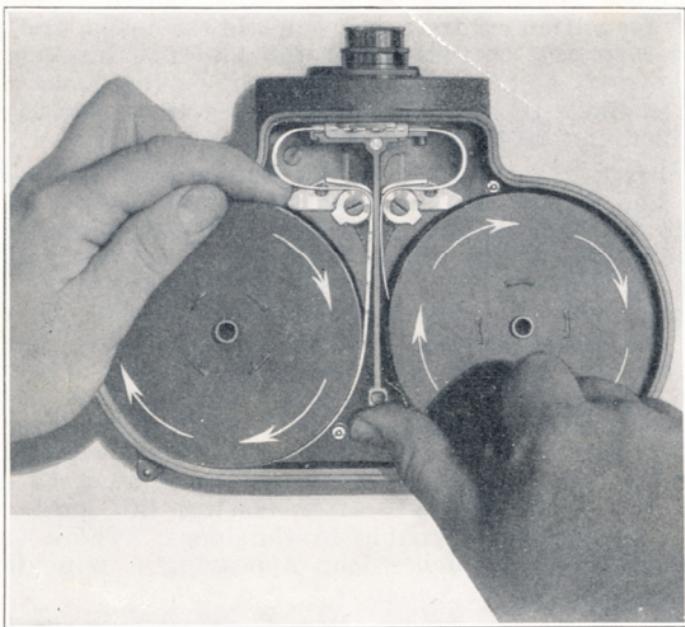


Fig. No. 3

*Completing the threading and loading operation: inserting end of leader on take-up spool; placing the latter on take-up spindle, taking up the slack and closing of film gate (171). A sure check of proper threading. If camera has been properly threaded there should be just six perforations visible in each loop after the gate has been closed.*

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6. The next operation is to wind the spring motor and set footage dial. The dial should first be turned to 96 (turn to left only—counter clockwise). Now take up the four feet of paper leader remaining on loaded film spool by pressing starting button, allowing the motor to run but be prepared to stop it immediately the dial advances to zero. At this point the film should be in photographing position, that is, at the taking aperture, provided the paper leader was not advanced beyond the point marked "STOP" while threading. This allows two feet of paper leader for threading, computing the footage from the point marked "STOP" at location of upper sprocket (part 153). Camera is now ready to begin taking pictures.

## READY TO "SHOOT"

The beginner should consult the exposure chart showing approximate calculations under varying weather and light conditions (see page 9). The focus on the Automatic Cine Camera being universal, there is only one thing to remember before taking a picture, that is to set the lens diaphragm at the proper speed. This is done exactly as with an ordinary still camera, excepting that the lens used in the Automatic Cine Camera is probably faster than the average user has been accustomed to and it will be necessary to become familiar with judging light conditions and the proper use of the lens diaphragm numbers.

The beginner will not take very long to determine proper exposures without consulting the chart, but it may be advisable to first commit to memory some of the essential requirements. The values shown in the chart should be modified depending upon locality.

Real study of the chart and allowance for varying light conditions should in a short time determine approximately the correct stop number to be used.

## HOW TO USE THE FINDER

The finder supplied as standard equipment with the camera corresponds exactly to the field obtained by the photographing lens. In looking through the finder tube it will be noted that objects appear more distant than they actually are; this is due to the necessity for diminishing the field the eye sees within the limits of the view finder objective lens and to obtain universal vision for objects both near and far.

This finder will be found as accurate as should be expected for objects within four feet of the camera; at distances of less than four feet it will be necessary to make only a slight allowance in the horizontal position noted through the finder tube. At all distances over four feet the finder is in proper correlation with the photographing aperture.

The small opening on the side of the view finder objective lens is for the purpose of observing the lens diaphragm or stop number which is plainly visible at all times through the finder opening, and the Cinematographer may note and adjust the stop number while the camera is being held in operating position. The observance of the lens diaphragm number through the finder tube is a decided advantage and a constant reminder to adjust the stop number at the beginning of each scene.

## UNLOADING THE CAMERA

There remains on the end of the loaded spool approximately five feet of paper leader which must be run through the camera mechanism before removing the camera door to unload the exposed film spool. It is always well to press the starting button, holding it until the dial registers over 105 feet; this gives ample assurance that the paper leader has enclosed the film at the end of the spool prior to the removal of the door. Take out exposed spool carefully, placing it in safety metal container which should be enclosed in cardboard carton for transportation to Film Developing Station.

## FLOATING FILM GUARD ROLLERS

The four floating film guard rollers (No. 281) shown in figure 5 (see page 2), hold the film securely on the spools. Note their position relative to the film and ***do not attempt to thread film outside these guards.***



Fig. No. 6

*Finder side of camera—showing correct holding position.*

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## HOW TO HOLD THE FILMO AUTOMATIC CINE CAMERA

For all ordinary filming, the position in which the camera is most advantageously held will be noted in figures Nos. 6, 7 and 8. It is always well to steady the camera by pressing it firmly against the forehead and nose while the left eye should be even with the finder. Keep the arms close to the body, forming as rigid a rest or support for the camera as possible. The camera may easily be held and operated with one hand; this should be done with the right hand grasped firmly around the front turret of camera as shown in figure No. 8. The starting button may then be manipulated with the second finger. In taking pictures, keep the finger on the starting button, holding it down to its maximum depth until ready to stop, which should be done quickly. If the button is allowed to rise slightly, the camera mechanism will continue to run unless the button is again pressed and released quickly, permitting it to rise to neutral position.

## USING A TRIPOD

The Filmo Automatic Cine Camera is provided with a tapper screw hole at its base which permits of mounting the camera to any of the smaller types of folding tripod. We recommend our folding metal tripods described elsewhere as the most ideal unit for the Filmo. The method of operating the camera on the tripod is exactly the same as when held by hand, except if the Cinematographer desires to get in the picture himself, he may do so by pressing the starting button, allowing it to lock in operating position. To stop the camera it is again necessary to press the starting button, allowing it to rise to neutral position.

## FOOTAGE DIAL

After threading leader from a fresh roll of film, footage dial should be set at 96, and camera started in order to run through paper leader. At the zero mark, film is in approximately correct position for photographing. Consult footage dial frequently and do not attempt to make scenes in less than 5 feet, which is equivalent in time to 10 seconds. For average scenes such as closeups of people who are moving, waterfalls, or action which is continuous but not changing in nature, 5 feet is ample. If longer study is desired of individual scenes, the Filmo Cine Projector has the advantage in that it may be reversed or stopped on any single picture.

## A PANORAMA PICTURE

For best results in making a panorama or scenic view of a wide stretch of country or landscape, move the camera very slow and evenly rather than attempt to include the entire scene in a few feet. Much more pleasing results will be had by following the object or landscape at brief intervals. Never follow passing objects traveling at great speed only a few feet distant from the camera. Objects followed too quickly will appear blurred on the screen, but if over fifty feet away better results will be had. The camera should not be moved faster than the object.



Fig. No. 7

*Motor side of camera—showing correct holding position.*

## TRICK PICTURES

The Cinematographer should carefully study the operation of the camera and learn to press and release the starting button quickly so that in making stop motion pictures not more than one exposure is made at a time. For best results in the taking of trick pictures by the stop motion process, the camera should be mounted on a tripod or it may be rested on end and held securely on a table or other support. The illusion of objects moving by themselves, such as chairs, furniture or any article of an inanimate nature, may be accomplished easily with

the Filmo Automatic Cine Camera. It is merely necessary to make a single exposure of the article each time it is moved, and of course when projected, it will have the appearance of moving of its own accord; likewise an illusion of rapidly moving traffic or street scenes may be obtained in the same manner, that is by making single exposures in rapid succession. The only care that need be taken in photography of this kind is to see that the camera is held or placed in a rigid position.

## USE OF SUNSHADE

Each Filmo Cine Camera is equipped with a standard sunshade, which is a small brass tube with a threaded end screwing to the front unit of the photographing lens. For all ordinary photography this sunshade is very essential and should always be used, especially in bright sunlight or for photographing scenes near open water, clouds, snow scenes or other bright objects. The sunshade will prevent halation or flare when photographing objects against the sky or in places where reflection is liable to reach the lens.

## SPEED

The large slotted screw controlling the motor governor on the front of the camera is set at normal speed (16 exposures per second) at the time the camera is shipped from the factory. If it is desired, because of photographing interiors or in adverse light conditions, to reduce the speed to one-half (8 pictures per second), it is only necessary to turn the slotted screw to the position corresponding with the one-half speed location. The turn of the screw automatically adjusts the governor located inside the camera so that the movement will respond to the lesser speed. It is sometimes quite desirable to obtain greater light than that which the lens is capable of covering, particularly in photographing interiors. At one-half speed the amount of light transmitted to the film is just double that when the camera is functioning at normal speed, on the other hand if the scene has action or it is desired to show normal action, it will not be possible to obtain it with the camera functioning at one-half speed. Pictures taken at one-half speed (8 exposures per second)



Fig. No. 8

*Front view, showing correct holding position for operating camera with one hand.*

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will naturally doubly accelerate the action photographed when projected on the screen at sixteen pictures per second.

## WINDING THE MOTOR

In winding the motor hold the camera in the left hand, as shown in Fig. No. 9. Allow key to nest in the palm of the right hand so that maximum leverage may be obtained; turn key to left (counter clockwise), at the

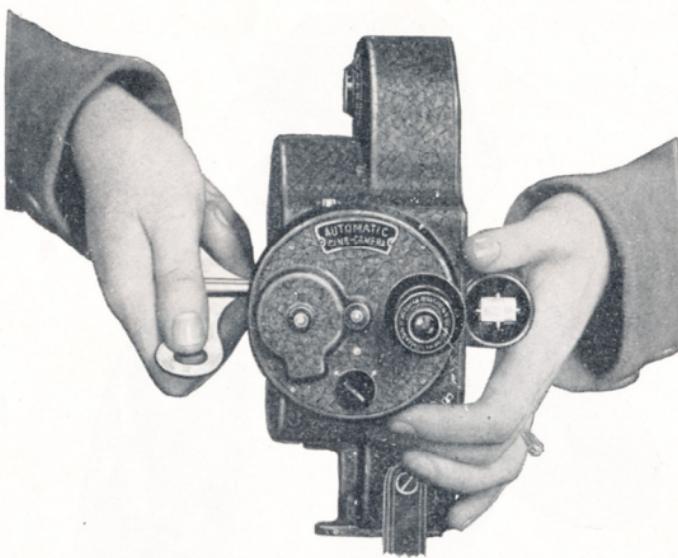


Fig. No. 9  
*Correct hold for winding motor.*

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same time giving the camera a twisting motion with left hand, or turn it in the opposite direction concurrently with each turn of the key; this action will greatly facilitate the needed exertion.

It is recommended that the spring motor be wound immediately after the taking of each scene, so that in an emergency, or in the filming of an important scene, a maximum film footage of approximately 27 feet (equivalent to 67 picture feet) will be at the disposal of the Cinematographer. It is not necessary, however, that the spring motor be wound more than 4 times in order to run off the entire 100 feet of film (equivalent to 250 picture feet). After the dial has passed the 100 foot mark, the film will have been entirely exposed, but motor should be run until leader at end of spool has been fully taken up, when dial will register about 105 feet.

## CUTTING AND EDITING

After you have received your finished film roll from the developing station, you may find in projecting it, that there are some parts so under or over exposed as to be objectionable on the screen; also parts where the movement

was not even, resulting in the picture becoming blurred or indistinct for several frames. It is easy to remedy these defects by cutting out the objectionable portions, and resplicing the film. It also may be desirable to correct the continuity, by bringing together certain scenes that were not taken in logical sequence during the time of photographing. It may also be desired to insert titles for each of the various scenes. These are all simple factors, after the art of making a good splice has been learned. Film which has been spliced properly is just as strong and pliable as any other part of a continuous strip of film, but splices which are improperly made will cause trouble and serious injury to the film. (See Accessory Folder for Film Splicer.)

It is manifestly difficult to obtain a full roll of perfect negative, so that both the action and continuity desired is obtained at the time the picture is made. In the filming of feature plays by professional producers, there is seldom less than 60,000 feet and more often over 100,000 feet of negative made for the average five-reel picture containing approximately 5,000 feet. Therefore, the Filmo Cinematographer should not become discouraged because each roll of negative may have parts where the photography is not exactly to his liking, but the amount of cut-outs because of imperfections on the average 100 ft. roll of negative will be surprisingly few after the user has acquainted himself thoroughly with the operation of the camera.

## DUPLICATE PRINTS

Any roll of film may be duplicated if sent to the film developing station prior to the time when it has had considerable usage. Film which has had many runnings and through handling is scratched or dirty will not make a very good print. It is advisable when a duplicate print is desired of a particular subject, to order it made after the film has been projected only one or, two times, and objectionable parts deleted; this will assure a print with all the qualities inherent in the original, and it will be free from abrasions or scratches. The cost of making duplicate prints is approximately \$5.00 per 100 feet.

## EXPOSURE CHART

(NOTE: Study modification of calculations appended to table.)

The following gives approximately the correct lens diaphragm stop numbers to be used with standard lens equipment supplied with the Filmo Cine Camera and using Cine Kodak Film:

Month	Kind of Weather	11	10-11	9-10	8-9	7-8	6-7	5-6
		AM to 1 PM	AM and 1-2 PM	AM and 2-3 PM	AM and 3-4 PM	AM and 4-5 PM	AM and 5-6 PM	AM and 6-7 PM
Jan. Nov. Dec.	Bright Sun	F 8	F8	F5.5	F3.5	F2.5	F1.8	
	Hazy Sun	5.6	4.5	3.5	3.5	2.5	1.8	
	Dull	4.5	3.5	3.5	2.5	1.8		
	Very Dull	3.5	3.5	2.5	1.8	1.8		
Feb. Oct.	Bright Sun	11	8	5.5	4.5	3.5	2.5	1.8
	Hazy Sun	8	5.5	4.5	3.5	2.5	1.8	
	Dull	5.5	4.5	3.5	2.5	1.8	1.8	
	Very Dull	3.5	3.5	2.5	1.8	1.8		
Mar. Apr. Sept.	Bright Sun	11	11	8	5.5	4.5	3.5	2.5
	Hazy Sun	8	8	5.5	4.5	3.5	2.5	1.8
	Dull	5.5	5.5	4.5	4.5	3.5	2.5	1.8
	Very Dull	3.5	3.5	3.5	3.5	2.5	1.8	
May June July Aug.	Bright Sun	11	11	8	8	5.5	4.5	3.5
	Hazy Sun	8	8	8	5.5	5.5	4.5	3.5
	Dull	5.5	5.5	4.5	4.5	3.5	3.5	2.5
	Very Dull	4.5	3.5	3.5	3.5	3.5	2.5	1.8

NOTE: These tables are for all Northern States and for altitudes up to 5000 feet; from 5000 to 8000 feet decrease stops one point. For Southern States decrease stops by one point. Note the approximate modification of these calculations for various objects and scenes listed separately. An exposure meter will assist materially in obtaining approximately correct exposures in foreign countries or in places where light conditions are uncertain.

## APPROXIMATE MODIFICATIONS OF CALCULATIONS SHOWN

NOTE: "Increase" refers to larger lens diaphragm opening and "decrease" to smaller opening; F 3.5 is the largest and F 16 the smallest opening.

Increase stops shown one point for the following:

Landscapes in fog or mist; buildings showing shady side.

Increase stops shown 1½ points for the following:

Trees covering most of the picture; landscapes with heavy foreground; heavy foliage and brook scenes; dock scenes; red brick or stone buildings and other dark objects; group scenes in the shade.

Increase stops shown two points for the following:

Closeup of persons in the shade; dark nearby objects covering almost the entire field of the picture.

Increase stops shown three to four points for the following:

Forest or woods interiors not open to the sky; poorly lighted river banks; ravines and subjects beneath trees.

Decrease the stops shown one point for the following:

Open landscapes with no foreground, open beaches, rivers, lakes and boat scenes; light colored objects; hills or mountains.

Decrease the stops shown two points for the following:

Distant landscapes; studies of heavy clouds; sunset and sunrise; view of sea water and snow scenes.

Subjects that will require openings greater than that which the lens is capable of covering should not be attempted without reducing speed of camera.

For interior scenes full aperture opening and reduced speed should be employed, but no attempt should be made to get details at normal speed operation except in well lighted rooms, or where very fast lens, or artificial light, as with Halldorson arc lamp is available.

Standard "F" system markings are used on all 25 m/m lenses, viz: F 3.5, F 5.5, F 8, F 11 and F 16. Each higher number gives just half the exposure of the preceding number. For instance, F 8, diaphragm will give an exposure in half the time of F 11.

Stop number F 4.5 indicated in tables is not engraved on the lens, but position of it will be found approximately midway between F 3.5 and F 5.5.

## TITLES

Titles materially improve the interest in projecting films. They are very easily made with the Filmo Title Board and set of celluloid letters. (See Accessory Folder.) Use about 20 inches of film for each line of not more than five words; in any event do not make titles shorter than one foot regardless of the number of words; this will provide for all average conditions and make possible the reading of titles with ease.

We are prepared to make printed titles to order. Prices will be quoted on application.

## BRIEF REMINDERS AND GENERAL INFORMATION

1. Do not forget key when starting out to take pictures.
2. Do not remove camera door after loading or before the film has been entirely exposed, except in a dark room.
3. Consult exposure chart carefully and particularly modifications to the calculations shown.
4. Use the sunshade at all times; never take pictures against the sunlight unless the lens is entirely protected from direct rays.
5. Do not follow objects too quickly or pan or tilt the camera unnecessarily. Make sure that objects are leveled as will be noted in the view finder; tilting the camera to one side will make the pictures have the appearance of slanting on the screen.
6. Do not forget to wind the spring motor when the footage dial registers 96, 25, 50 and 75 feet. It is recommended that motor be wound after the taking of each scene in order to have reserve footage in an emergency.
7. After loading, set your footage dial at 96.
8. When entire roll is exposed allow camera to run until dial registers over 105 in order to take up paper leader on end of roll which protects film from being fogged while spool is being removed from camera.
9. After loading the Filmo Automatic Cine Camera, do not destroy the yellow box in which the roll of film is contained at the time of purchase, but save it to be used as a

container in which to mail the film for finishing and development. Space is provided on the carton to insert name and address of sender as well as panel for stamps.

10. If for any reason the motor should cease to function after full winding, insert key in socket, giving it a slight twist to the right, at the same time press the starting button. If this fails to start the mechanism, take the camera into a dark room, open the door and examine for possible jamming or buckling of the film or leader. If this condition is found, it will be necessary to remove lower take up spool together with the damaged film, then rethread the camera exactly in accordance with instructions for threading a new reel. Never attempt to make interior adjustments unless it is not desired to preserve the film already exposed on the take up spool. The adjustment, however, may be made in daylight but will fog approximately 10 feet of film. These 10 feet must be advanced through the mechanism and take up spool before resuming the taking of pictures.

11. Buckling or jamming of the film might be caused by improper threading of the leader or the failure to seat the perforation holes in the leader or film securely on the teeth of the sprocket or the shuttle teeth of the movement, also trouble might develop if for any reason the flange of the empty take up spool is bent so that the leader or film is not properly seating on the hub of the spool. It is well to test out the clearance of the flanges on the empty spool prior to loading a new roll, so that trouble may be prevented before completing the threading operation.

12. Camera through lack of lubrication may stick occasionally on high spot of cam movement. If it does not readily start by applying key as explained above in paragraph 10, unscrew lens mount and gently touch or move the small shutter gear; this should release the starting button and permit of regular operation.

## CARE OF CAMERA

When not in use the camera should be carefully placed in the Carrying case and kept free from dust, sand or dirt. Possibly after excessive use covering a period of two or three years it might be found advisable to have

the camera gone over at the factory and new Graphite packed in the spring motor housing.

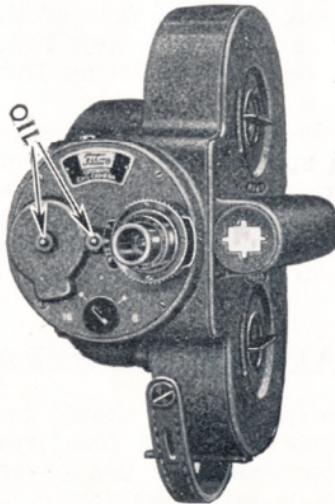
Clean particularly the aperture channel, wiping off both the front and back sides of the gate as well as the small film guides around the sprocket. It is also well to occasionally wipe the inside of the camera.

The lens should be cleaned frequently with regular lens cleaning cloth or lens tissue, which may be had at a nominal cost. Make sure that lens elements are screwed up tightly and that complete lens unit is screwed firmly into the camera.

Occasional cleaning of outer surface of front and rear lenses of the finder will insure a clear vision at all times.

## OILING

Two places on the camera should be oiled at frequent intervals. Remove the two caps shown in cut below with a penknife, putting in 3 or 4 drops of high grade watch oil, after which replace caps securely. Oiling is especially necessary when camera is operated in humid countries or by the sea or salt water. (See Accessories for Oil and Can.) Occasionally a drop of oil should be placed in the oil holes located on top of each film guide roller—see illustration below.



## NOMENCLATURE\*

### *Terms Most Often Used in Motion Picture Photography*

**ACTION**—A signal which the Director gives to the players to begin performing.

**APERTURE**—The opening in the film channel or gate through which the image is imparted to the film.

**CINE**—A prefix used in description of the motion picture art or apparatus.

**CINEMATOGRAPHER**—One who operates the camera in taking motion pictures.

**CLOSE-UP**—Scene or action taken with the principal subject close to the camera (usually four feet).

**CUT-BACK**—Scenes which are returned to previous action.

**CUT-IN**—Anything inserted in a scene which breaks its continuity.

**CUTTING**—Editing a picture by the elimination of non-acceptable film.

**DOUBLE EXPOSURE**—The exposure of a negative film in a camera twice before development.

**DUPE**—A negative made from a positive.

**EXTERIOR**—A scene supposed to be taken out of doors.

**FLASH**—A short scene, usually not more than three to four inches of film.

**FRAME**—A single picture of the series of a motion picture film.

**FRAME LINE**—The dividing line between two pictures.

**INTERIOR**—Any scene supposed to be taken inside a building.

**IRIS**—An adjustable lens diaphragm.

\*A number of the above are from the transactions of the Society of Motion Picture Engineers.

**JOINING**—Splicing into a continuous strip, usually 400 feet (equivalent to 1,000 ft. of standard), the separate scenes, titles, etc., of a picture.

**LEADER**—That piece of blank film or paper attached to the beginning and end of a roll of film.

**LOOP**—The necessary slack in a leader or film between the continuous and intermittent motion.

**NORMAL SPEED**—Pictures taken and projected at the rate of 16 exposures per second.

**PAM**—Contraction for panorama. To rotate a motion picture camera while in operation about an axis perpendicular to the finder or photographic lens.

**RETAKE**—Rephotographing a scene.

**SCENE**—The action taken at a single camera setting.

**SHOOTING A SCENE**—Photographing a scene.

**SHUTTLE**—The teeth in a film movement mechanism, which engages the perforations in the film to propel its movement.

**SPLICING**—Joining the ends of film by cementing.

**SPROCKET**—The toothed cylinder which engages the perforations in the film for feeding and taking-up.

**STILL**—A picture without movement, also a picture from a single negative or frame.

**STOP NUMBER**—Lens iris diaphragm opening.

**TAKE-UP**—(Noun) The mechanism which receives and winds the film after it passes the picture aperture.

**TAKE-UP**—(Verb) To wind up a film after it passes the picture aperture in the motion picture apparatus.

**TILT**—To rotate a motion picture camera parallel to the direction of the film motion and in a vertical plane through the optical axis..

**TITLING**—Preparation of headings or explanations for scenes.

**TRICK PICTURE**—A Motion Picture intended to give the effect of action other than that which really took place.

## USEFUL ACCESSORIES FOR CAMERA

(See Accessory Folder for description)

Title Board and Letters

Tripod—Metal Folding and Type E

Carry Case

Double Speed Mechanism

Super Speed Camera

Halldorson, Portable Arc Light for Interior Scenes

Book—"How to Make Your Own Motion Picture Plays"

Focusing Mount for Cooke Lens

Photo Lenses—High Speed and Long Range Telephoto

Color Filter

Splicer

Rewinder

Film Cement

Exposure Meter

Range Finder

Scene Card Binder

Prismatic Eye

Iris Vignetter

Individual Character Title Outfit





Fill in and mail the attached Registration Card; otherwise your Camera or Projector cannot be registered

# OUR GUARANTEE

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## To The Purchaser

Filmo Camera No. 28119  
Filmo Projector No. 158616  
C. E. A. S. E.  
TAYLOR HOWELL

Date \_\_\_\_\_

We guarantee that FILMO Motion Picture Camera and Projector will do perfectly the work for which it is designed and sold. Any adjustments necessary due to imperfections in material or workmanship will be made without charge for a period of two years, provided instruments are returned prepaid to our Chicago Factory and the serial number of machine (Camera or Projector) is registered with us under owner's name.

Lamps and films are not guaranteed by the Bell & Howell Company, but we will extend every endeavor to co-operate for you with the manufacturers thereof.

This guarantee is backed by the largest and strongest manufacturers of motion picture machinery in the world.

### BELL & HOWELL COMPANY

1801-15 Larchmont Ave., CHICAGO

NEW YORK  
220 W. 42ND ST.

HOLLYWOOD  
6324 SANTA MONICA BLVD  
LONDON (B. & H. CO., LTD.)  
320 REGENT ST.

Established 1907



*Tear off and return the attached Filmo Registration Card to Bell & Howell Company, Chicago, Ill.*

# BELL & HOWELL COMPANY

## BRANCHES and SERVICE STATIONS

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1801 Larchmont Avenue  
CHICAGO, ILL.

---

220 West 42nd Street  
NEW YORK, N. Y.

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6324 Santa Monica Boulevard  
HOLLYWOOD, CALIF.

---

BELL & HOWELL CO. Ltd.  
320 Regent Street  
LONDON, W. 1., ENGLAND

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DEALERS IN ALL PRINCIPAL CITIES



# **IMPORTANT!**

*(First read instruction book thoroughly)*

Every BELL & HOWELL Camera is guaranteed for TWO years provided you have your name, address, and serial number registered at BELL & HOWELL headquarters at Chicago. Be sure to fill in completely the registration card which you receive with the camera and mail at once.

Camera cover cannot be closed and fastened until film gate arm is pressed firmly against aperture. (See Page 5 of Camera Instruction Book.)

Do not remove cover from camera after loading (unless in dark room) until entire roll has been run off.

Make sure that the flanges on your empty spool are not bent.

See that the paper leader is properly engaged on the spool hub and that it does not catch between the flanges anywhere.

Keep the camera clean, particularly the film gate and lens. Use the small camel's hair brush for cleaning film gate and aperture, also interior of camera. Examine gate and aperture before loading each new roll.

Be sure that all parts of the lens are screwed tightly and that the lens is properly set in the camera. Keep the lens scrupulously clean.

The purpose of the rubber lens cap is to keep lens clean. Obviously it must be removed before using camera.

*(over)*

~~~~~ Read other side first ~~~~~

Study the exposure chart and follow modifications on back.

Panoram VERY slowly.

If camera apparently sticks, remove the lens and gently move the shutter gear while pressing the starting button. (Carefully avoid touching the shutter.) Should this be ineffective, remove camera cover in dark room, open gate and readjust film loops.

To ascertain if camera is loaded, remove lens and press starting button for a single picture, observing if film or paper is in aperture. (Film appears whitish; paper black.)

Be sure to give each scene sufficient footage. Normally, the period of projecting the picture will equal the duration of taking. Be sure to set footage dial when reloading and to wind spring after each exposure. Spring allows for about 25 feet of exposure.

Always keep camera well oiled, following directions given in instruction book.



**BELL & HOWELL COMPANY**

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New York Hollywood London (B & H Co., Ltd.)  
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Pioneer Manufacturers of Professional Cinematograph Cameras and Equipment used almost Exclusively by World's Foremost Producers